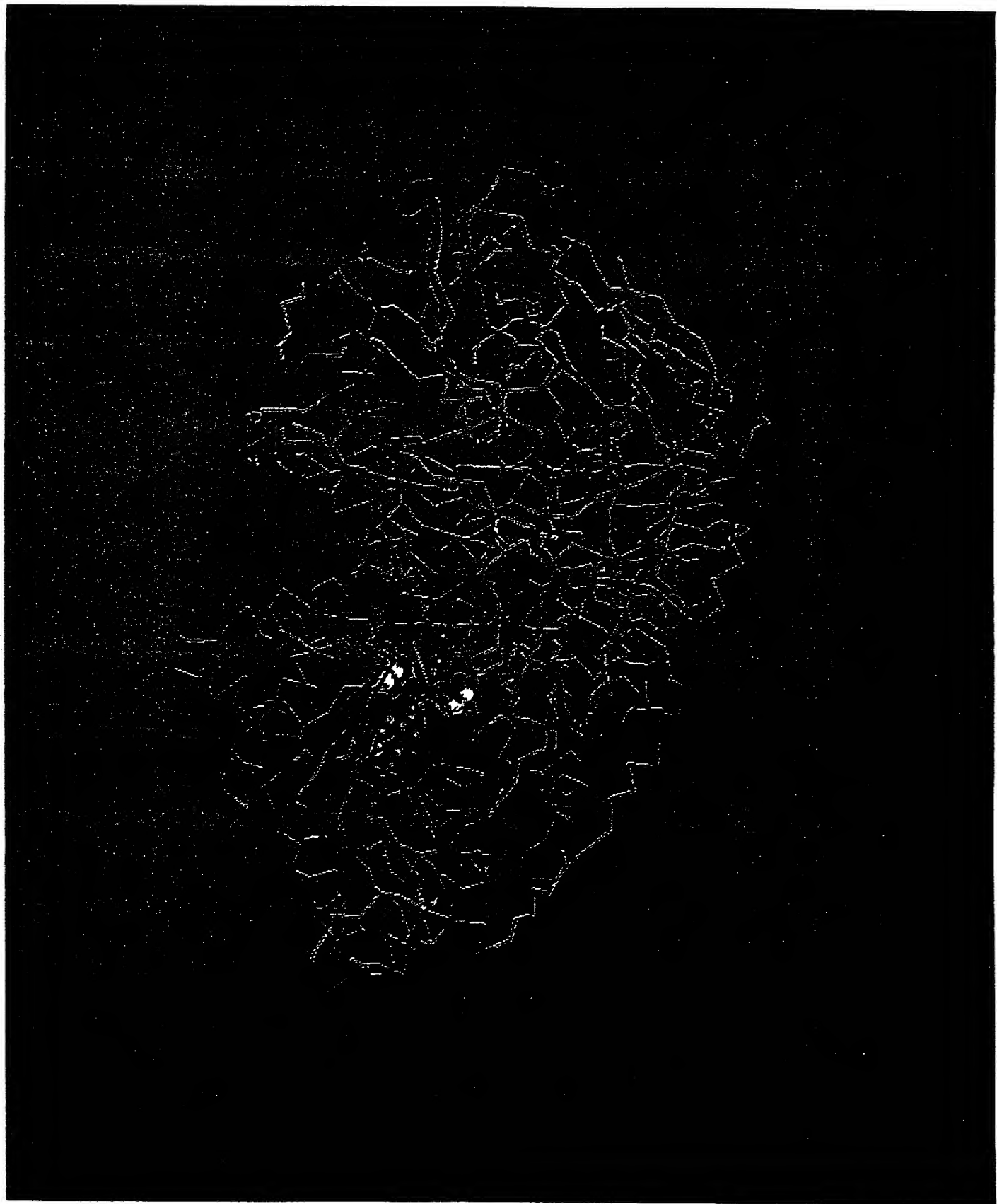
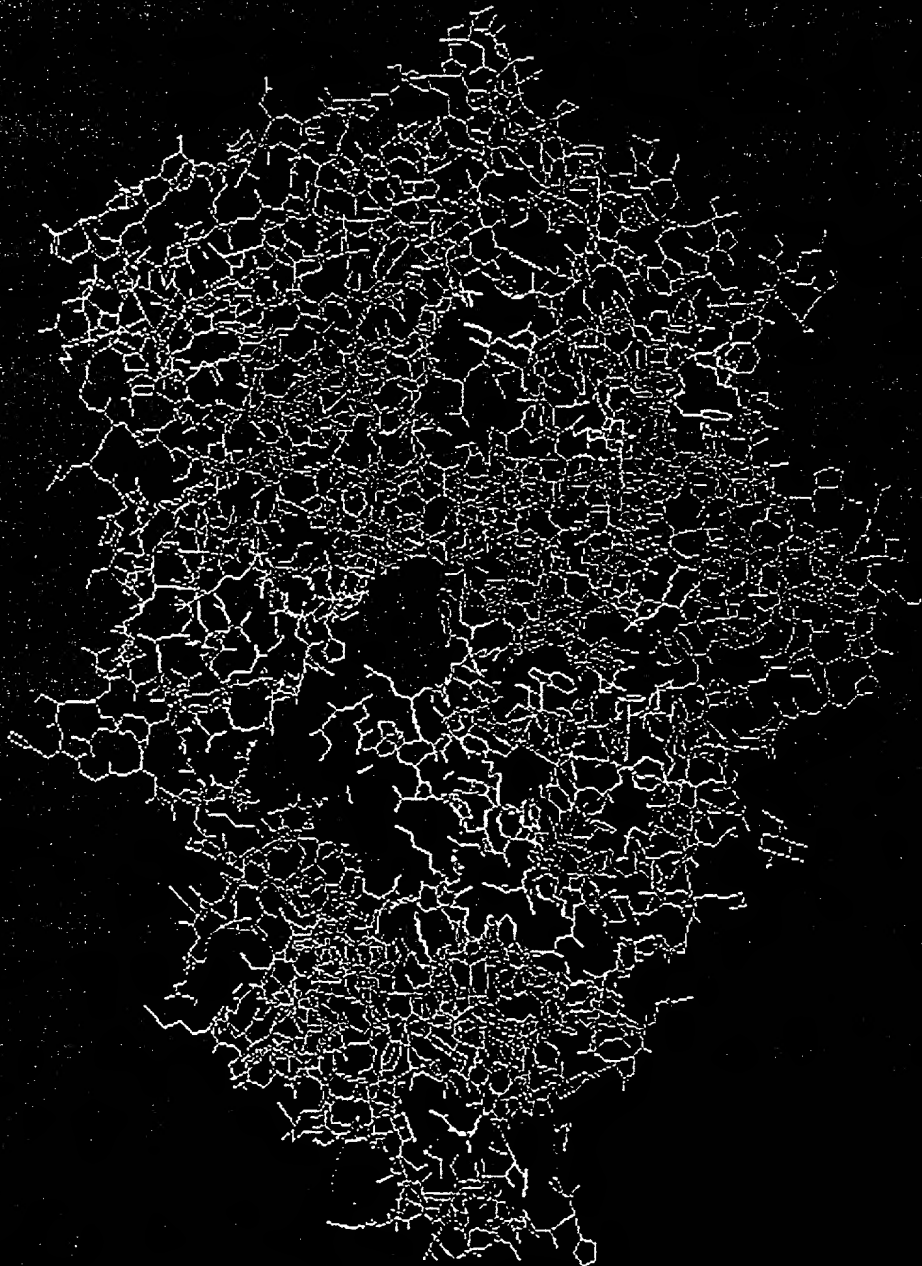


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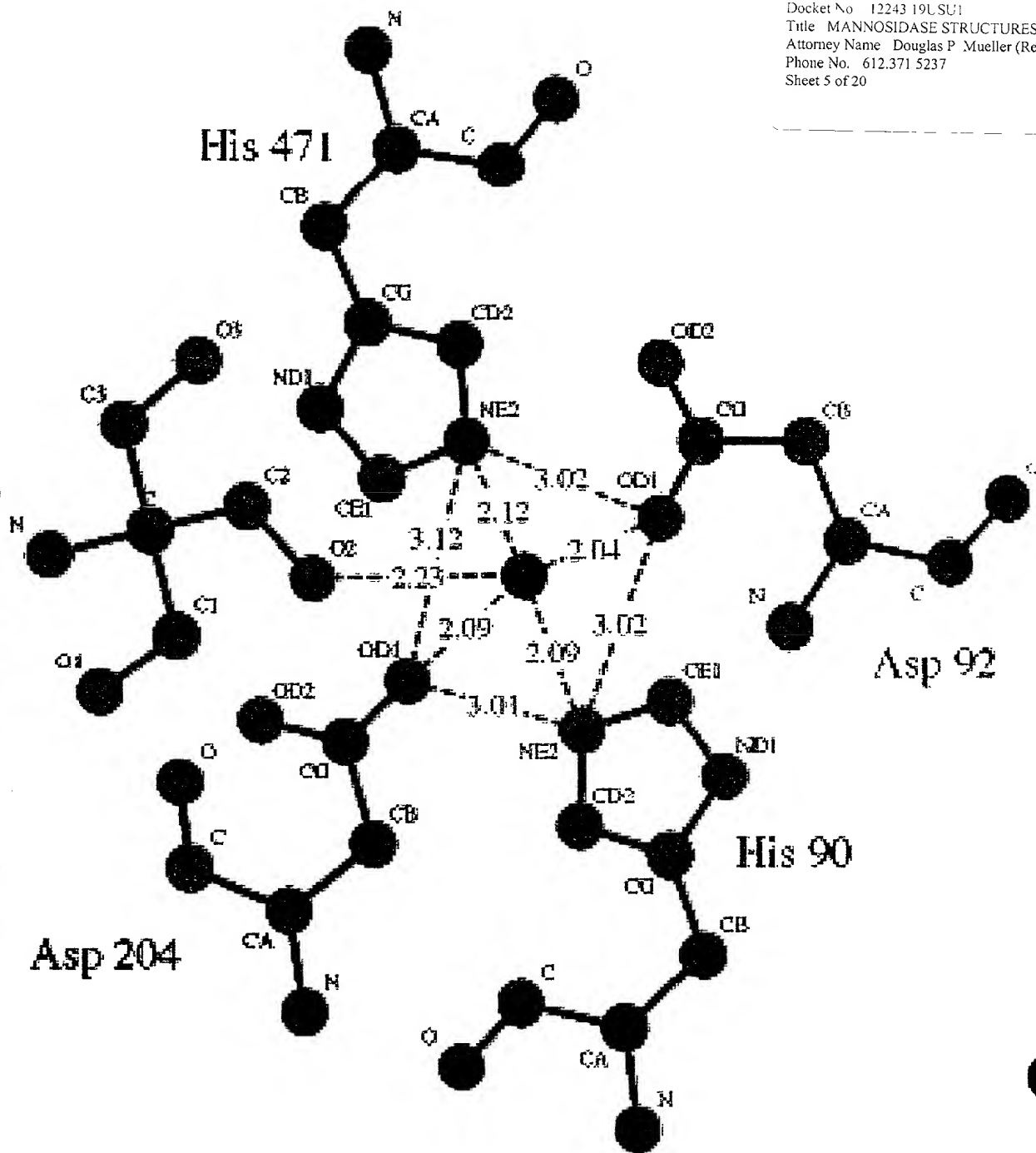
His 471

Asp 92

His 90

Asp 204

● Zn²⁺



pMT/BIp-N-HIS-dGMII [851 to 4042] -> 1-phase Translation

DNA sequence 6642 b.p. TCGCGGTTTCG ... AGGCCCTTTCGT circular

N-HIS added to pMTV5HisA (b/t BglII/EcoRI) for drosophila expression of tagged proteins.
Add drosophila dGMII from clone D11 (shortened 3') DAK/Tara 15-3-99

Inventor: ROSE et al.
Docket No.: 12243.19USU1
Title MANNOSIDASE STRUCTURES
Attorney Name Douglas P. Mueller (Reg. No. 30,300)
Phone No. 612 371 5237
Sheet 6 of 20

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G G S S L A S G E L	E I M Q D R R L A S	D D E R G L G Q G V			
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Figure 7

Aug 21, 00 13:56

Page 1/2

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ALIGNMENT OF EXPRESSED SECRETED DROSPHILA MANNOSIDASE
WITH HUMAN MANNOSIDASE
Percent Similarity: 52.157 Percent Identity: 43.039

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101 HLL..PSQLSVDTADCLFASQSGSHNSDVQMLDVYSLTSFSDNPDGGVW 148
63 KOGWNIKYDPLKYNAAHKLKVFVPHSHNDPGWIQTFEEYQHDPKHLS 112
149 KQGFDTYESNEWDT.EPLQVFPVPHSHNDPGWLKTFNDYFRDKTYIFN 197
113 NALRHLHDNPEMKFIWAEISYFARFVHDLGENKKLQMKSIKNGOLEFVT 162
198 NMVLKUKEDSRKFIWSEISYLSKWDIIDIQKKDAVKSLIENGQLEIVT 247
163 GQWMPDEANSHWRNVLQLTEGQTLKQFANVTPTASWAIDPFGHSPM 212
248 GQWMPDEATHYPALIDQLECHOWLENNIGVKPRSGMALDPFGHSPM 297
213 PYILOKSGFNMLIQRTHSYVKKELAAQQLQLEFLWRQIWNKGDALFTH 262
298 AVLNRAGLSHMLIQRVHYAVKKFALHKTLEFWRQNWDLGSVTDILCH 347
263 MNPFSYDIPTHTCGPDPKVCQDFPKRMGSFGLSCPWKVPRTISDQNV 312
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313 ARSDDLVDQWKKAEALRTNVLILPLGDDFRKQNTENDVQRVNYERLF 362
398 SRARMLLDQYRKKSKLFRKTVLLAFLGDDFRYCEYTEMWDLQKNYQLFD 447
363 HINSQAHFNVAQFGTLQYFDVAHQERA...GQAEFFPLSGDFFTYA 408
448 YNNSQSKFKVKIQFGLTSDFFDALDKADETQRDKGQSMFPVLSGDFFTYA 497
409 DRSDNTWGYTSPRYHKRMDRVLNHYVPAEMLSAW.....HSWD.... 449
498 DRDDHYWGYTSPRYHKRMDRIMESHLEAAELIYFALQAHKYKINKF 547
450 GNARIEERLQARELSLFQHHDGITGTAKTHVVVDYEQRMQEAALKACQM 499
548 LSSSLYALTARNLGLFQHHDAITGTAKDWVVDYGTRLFHLMLVLEK 597
500 VMQOSVYRLITKPSIYSPDFSFYSFTLDDSRWPGSGVEDSRTTILGEDI 549
598 IIGNSAFLIGDKLTVDSYSPDTFLEMDLKQKQSDSLPKQNIIRLSAE. 646
550 LPSKHVVMHNTLPHWRQQLVDFYVSSPFSVSTDLANNPBAQVSPVMSWH 599
647 ..PRVLVYNPLQDRISLVSVYSSPTQVFSASGKPEVQVSAVW... 691
600 HDTLAKTIHPQGSTTKYRIIFKARVPPMGLATVLTISDSKPEHTSVASN 649
692 .DT.ANTI....SETAYEISFRAHIPPLGLKVYKILESASS...NSHLAD 732
650 LLLRKNPTSLPLGQYEPEDVRFGDPREISLRVGNPGPTLAFSEQGLKLSIQL 699
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700 TQDSPHVPVHFELKYGVRSHGDRSGAYLFLPENGASP.VELGQPVVLVT 748
781 KEDGKHHEVNVQFSWYGTTIKRDKSGAYLFLPDGNAPVYVYTPFPFVVT 830
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Monday August 21, 2000

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Aug 21, 00 13:56

Page 2/2

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831 HGRIYSEVTCFFDHVTHRVRLYHIQIEGQSVESNIVDIRKVVNREIAM 880
793 RLETHIDSGDIFVTDNLGLQFIKRRRLDKPLQANYYPISGMEFIEDANT 842
881 KISSDIKSONRFYTDLNGYQIQPRMTLSKLPLQANYYPMTTMYIQDAKH 930
843 RLTLTGQPLGSSSLASGELEIMODRRRLASDDBERGLQGQVLDNKPVLHIY 892
931 RLTLLSAQSLGVSLSNSGQIEVIMDRRLMQDDNRGLEQGIQDNKITANLF 980
893 RLVLKVNANCVRPSKLHPAGVLTSAAHKASQSLDDPL.....DKTFAENE 938
981 RILLEKRSANVTEEEKSVSYPSLLSHITSSLMNHVPIPWANKF...SSP 1027
939 WIGAQQGQFGDHPISAREDDLDVSVMRRLTK..SSAKTORVGVVLRHTNLMQ 986
1028 TLEQGEFSPLOQSSLPDCDIHLVNLRTIOSKVGNGHNSNEAALILHRKG.FD 1076
987 C.....GTPÉ...EHTQ.KLDVCHLLPN..VARCETTLTFLQNLHLDCM 1026
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1/1


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graph TD
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    G2 ---|β1,4| M3[M3]
    M3 ---|α1,3| M5[M5]
    M3 ---|α1,3| M4[M4]
    M5 ---|β1,2| G3[G3]
    M4 ---|α1,6| M6[M6]
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Figure 8C

Fig. 9A



Fig. 9B

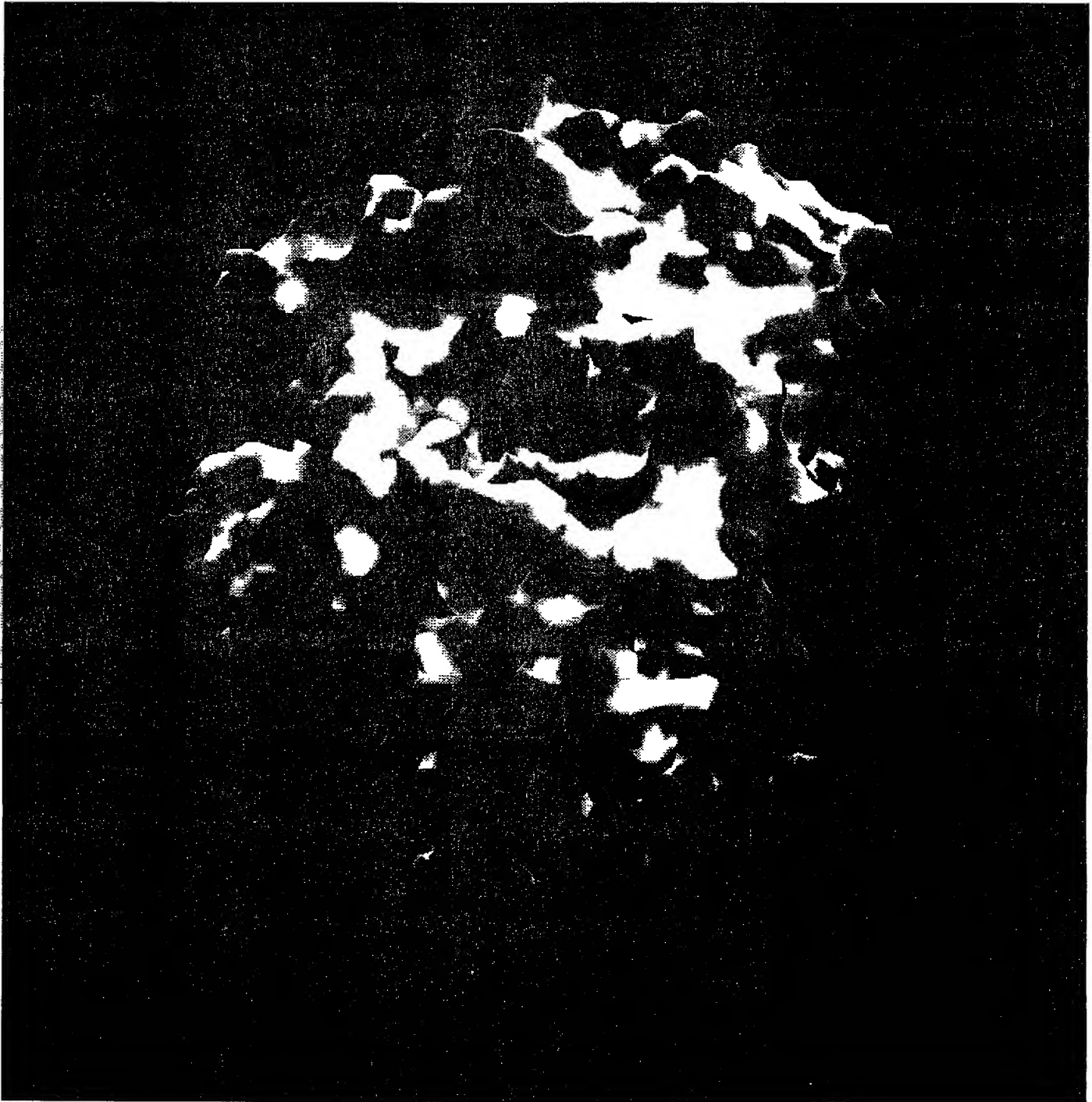
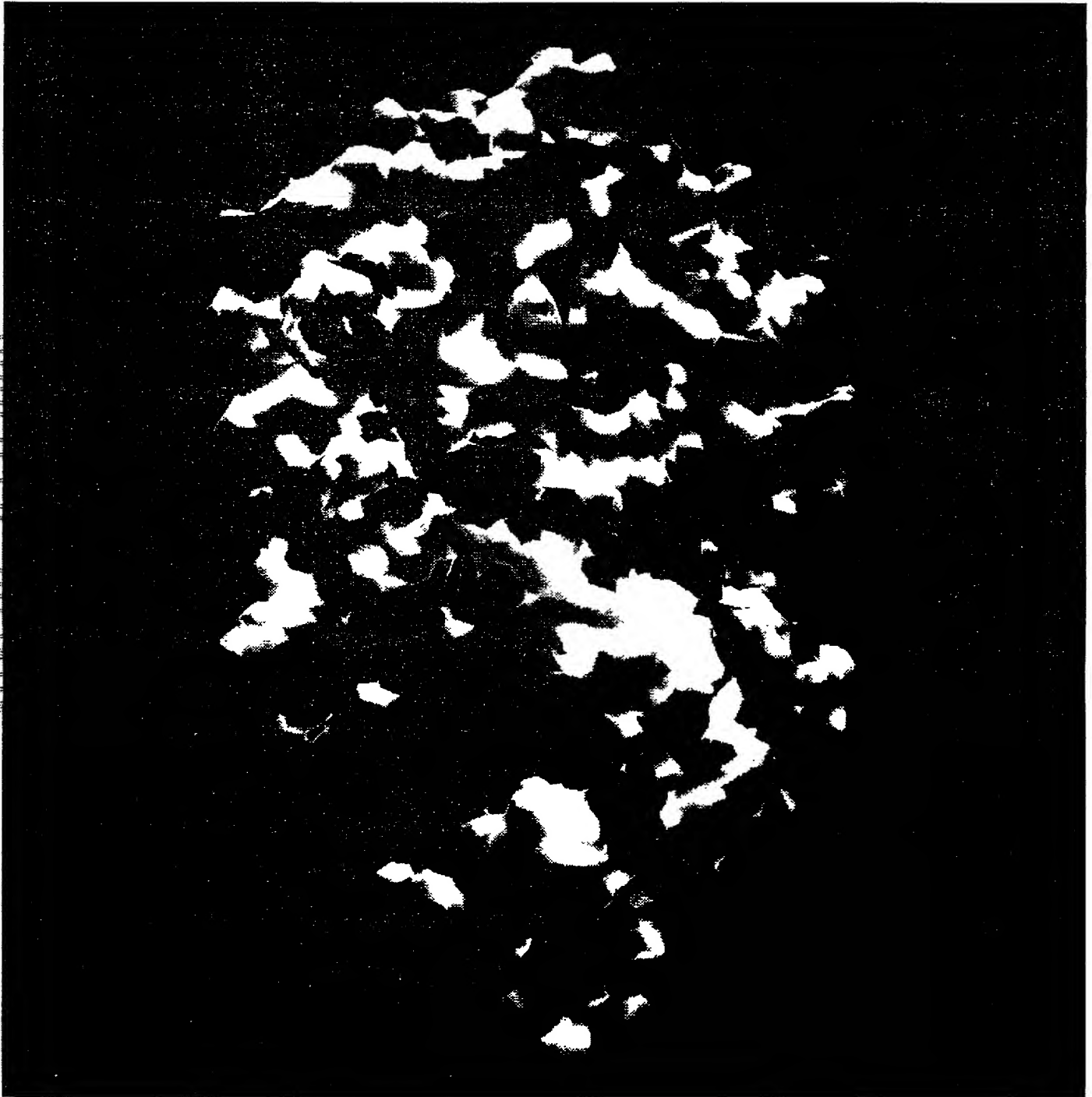


Fig. 9C



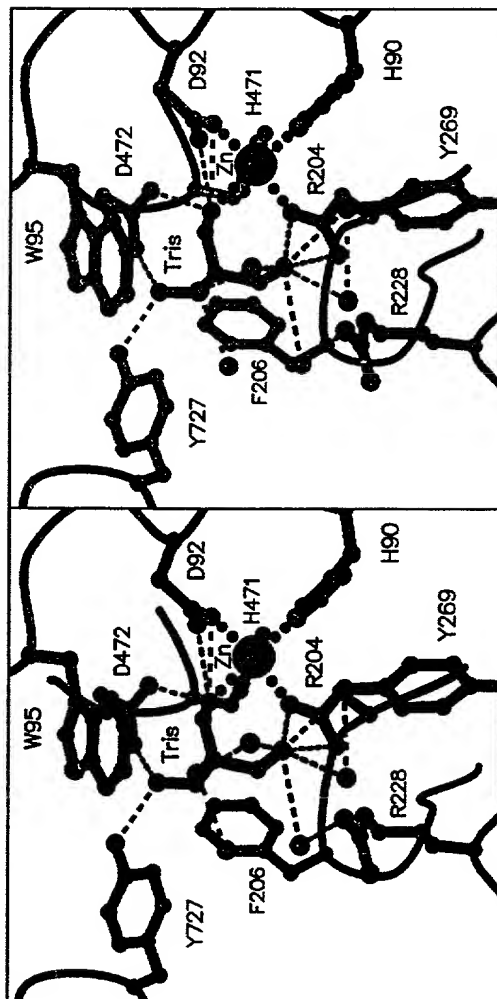


Figure 10A

Figure 10A is a schematic diagram of a mannosidase structure, showing the active site and the coordination of a zinc ion (Zn) by various residues and a Tris ligand. The diagram illustrates the interaction between the zinc ion and the residues W95, D472, Y727, F206, R204, R228, H90, Y269, D92, and H471, as well as the Tris ligand. The diagram is a schematic representation of the molecular structure, showing the relative positions of the atoms and the bonds between them.

Figure 10B

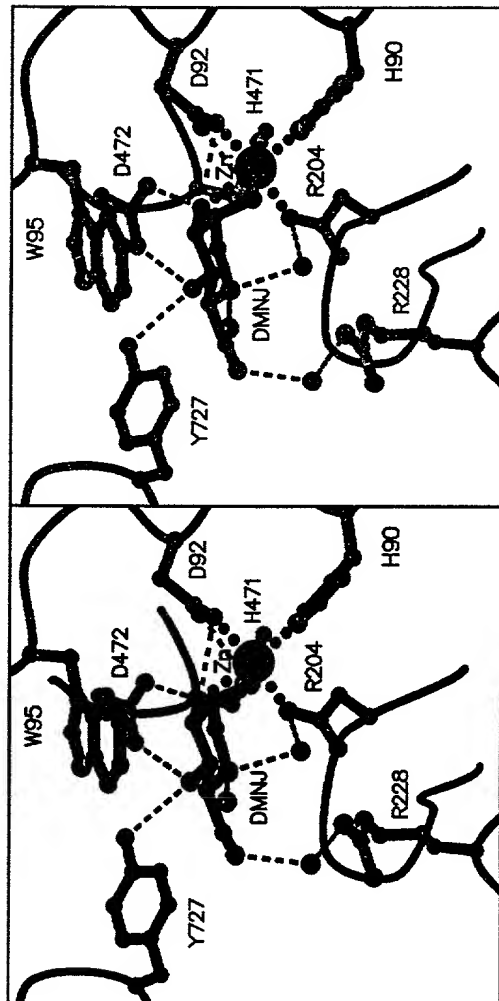


Figure 10C

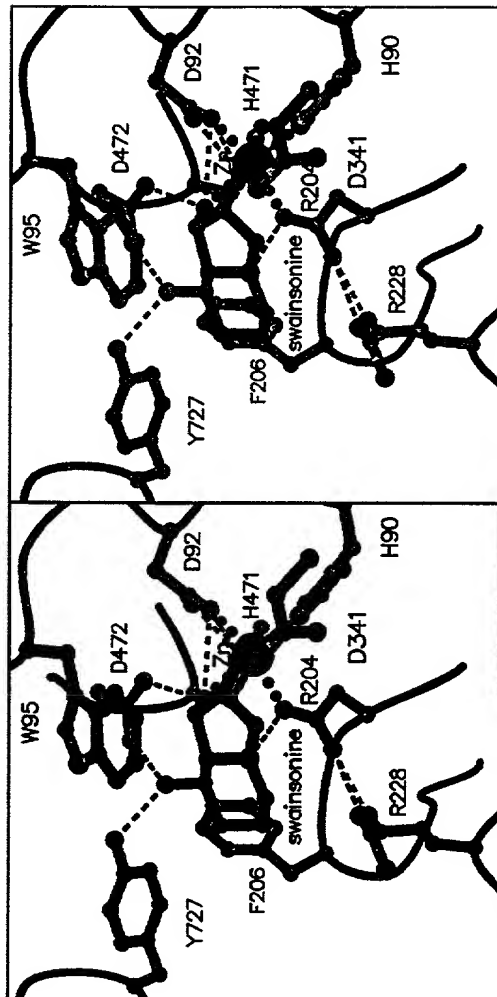


Figure 11A

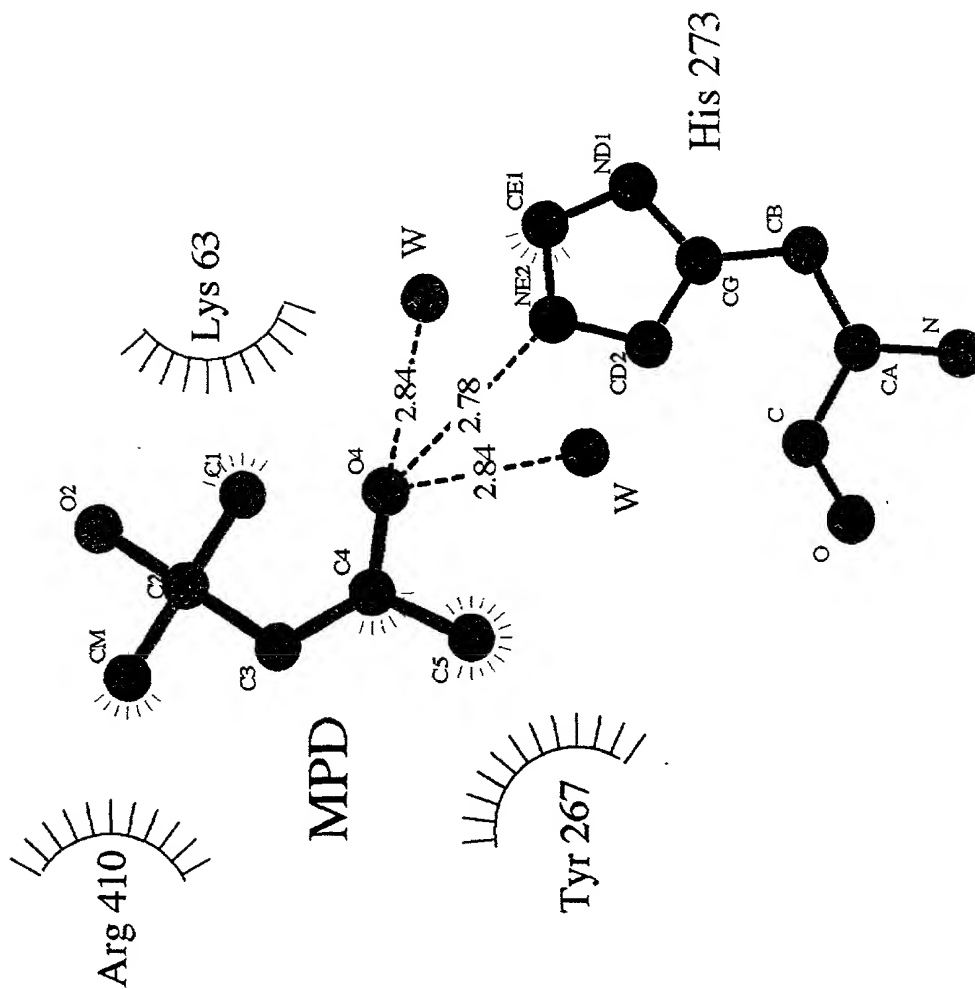




Fig. 11B

